

Safety Data Sheet according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 07/03/2011

Revision date: 30/06/2016

Supersedes: 01/02/2013

Version: 4.0

## CLM-8475-H

1.1.       Product identifier         Product form       :       Substance         Substance name       :       L-ARGININE-N-FMOC, PBF-OH (U-13C6, 99%) (CONTAINS SOLVENT)         CAS No       :       154445-77-9 (Unlabeled)         Product code       :       CLM-8475-H         Formula       :       C287C0H40N4078         Synonyms       :       L-Arginine-N-FMOC, Pbf / No-Fmoc-No-422.4, 6.7-pentamethyldihydrobenzofuran-5-sulfonyl)-L-arginine / No-Fmoc-No-422.4, 6.7-pentamethyldihydrobenzofuran-5-sulfonyl)-L-arginine / No-Fmoc-No-422.4, 6.7-pentamethyldihydrobenzofuran-5-sulfonyl)-L-arginine / No-Fmoc-No-422.4, 6.7-pentamethyldihydrobenzofuran-5-sulfonyl)-L-arginine / No-Fmoc-No-4212.4, 6.7-pentamethyldihydrobenzofuran-5-sulfonyl)-L-arginine / No-Fmoc-No-4212.4, 6.7-pentamethyldihydrobenzofuran-5-sulfonyl)-L-arginine / No-Fmoc-No-4212.4, 6.7-pentamethyldihydrobenzofuran-5-sulfonyl)-L-arginine / No-Fmoc-No-4212.4, 6.7-pentamethyldihydrobenzofuran-5-sulfonyl)-L-arginine / No-Fmoc-No-4212.4, 6.7-pentamethyldihydrobenzofuran-5-sulfonyl)-L-arginine / No-Fmoc-No-4212.4, 6.7-pentamethyldihydrobenzofuran-5-sulfonyl)-L-arginine / No-Fmoc-No-4214.4300         1.2.       Usea advised against         1.3.       Details of the substance or mixture and uses only.         1.3.       Details of the substance or mixture         Cassification of the substance or mixture         Classification of the substance or mixture         Classification according to Breactive ST222008 [CLP]         Shin Int. 2       1315		substance/mixture and of the company/undertaking
Substance name : L-ARGININE-N-FMOC, PBF-OH (U-13C6, 99%) (CONTAINS SOLVENT) CAS No : 164445-77-9 (Unlabeled) Product code : CLM-8475-H Formula : C28*C6H40N4O7S Synonyms : L-Arginine-N-FMOC, Pbf / Na-Fmoc-Nu-Pbf-L-arginine / Na-Fmoc-Nu-Pbf-L-a		
CAS No : 154445-779 (Unlabeled) Product code : CLM-9475 H Formula : C28*C64N0A75 Synonyms : CAPGinine-Ar-FMOC.Pbf / Na-Fmoc-Nu-(2,2,4,6,7-pentmethyldhydrobenzofuran-5-sulfonyl)-L-arginine / Na-Fmoc-Nu-02,2,4,6,7-pentmethyldhydrobenzofuran-5-sulfonyl)-L-arginine / Na-Fmoc-Nu-02,2,4,6,7-pentmethyldhydrobenzofuran-5-sulfonyl)-L-arginine / Na-Fmoc-Nu-02,2,4,6,7-pentmethyldhydrobenzofuran-5-sulfonyl)-L-arginine / Na-Fmoc-Nu-02,2,4,6,7-pentmethyldhydrobenzofuran-5-sulfonyl)-L-arginine / Na-Fmoc-Nu-02,2,4,6,7-pentmethyldhydrobenzofuran-5-sulfonyl)-L-arginine / Na-Fmoc-Nu-02,2,4,6,7-pentmethyldhydrobenzofuran-5-sulfonyl)-L-arginine / Na-Fmoc-Nu-02,2,4,6,7-pentmethyldhydrobenzofuran-5-sulfonyl)-L-arginine / Na-fmoc-Nu-02,2,4,6,7-pentmethyldhydrobenzofuran-5-sulfonyl)-L-arginine / No additional information available 1.2. Uses advised against No additional information available 1.3. Details of the supplier of the safety data sheet Cambridge Isotope Laboratories, Inc. 50 Frontage Road Andvorer, NA 01810 USA USA 1.800-322-1174 Int: 1-978-749-8000 citabeles@isotope.com Emergency telephone number: Emergency telephone numbers: Chemtrez: 1-800-422-4300 (24 hours) International: 1-703-741-5970 (24 hours) International: 1-703-741-5970 (24 hours) Sector N 22 Hazards Interlification = 21. Classification of the substance or mixture Classification according to Regulation (EC) No. 1272/2008 [CLP] Skin Irti. 2 H315 SFUT S2 H335 Full Lext of H-phrases: see section 16 Classification according to Directive 67/548/EEC or 1999/45/EC xi, R306/738 Full Lext of R-phrases: see section 18 Classification according to Directive 67/548/EEC or 1999/45/EC Xi, R306/738 Full Lext of R-phrases: see section 18 Classification (GHS-US) Skin Irti. 2 H315 Skin Irti. 2 H315		
Product code : CLM-8475-H Formula : C22*C6H40N4075 Synonyms : L-Arginine-N-FMOC.Pbf / NG-Fmoc-Nuc-Pbf-L-arginine <b>1.2. Relevant identified uses of the substance or mixture and uses advised against</b> <b>1.2. Relevant identified uses</b> Main use category : Professional use Industrial/Professional use spec : For professional use only. <b>1.2. Uses advised against</b> No additional information available <b>1.3. Details of the supplier of the safety data sheet</b> Cambridge lsotope Laboratories, Inc. 50 Frontage Road Andover, IMA 01810 USA USA: 1-800-322-1174 Int: 1-978-749-8000 <b>classisgisotipe.com</b> <b>uww.isotope.com</b> <b>uww.isotope.com</b> <b>uww.isotope.com</b> <b>uww.isotope.com</b> <b>uww.isotope.com</b> <b>uww.isotope.com</b> <b>SecTION 2: Hazards identification</b> <b>2.1. Classification of the substance or mixture</b> <b>Classification according to Regulation (EC) No. 1272/2008 [CLP]</b> Sin Inti? 2 H315 Eye Int? 2 H315		
Formula       : C28*C6H40N4O7S         Synonyms       :: LArginine-N-FMOC.P6f / NG-Fmoc.Nuc-(2,4,6,7-pentamethyldihydrobenzofuran-5-sulfonyl)-L-arginine / NG-Fmoc.Nuc-P26-L,6,7-pentamethyldihydrobenzofuran-5-sulfonyl)-L-arginine / NG-Fmoc.Nuc-P26-L,6,7-pentamethyldihydrobenzofuran-5-sulfonyl)-L-arginine / NG-Fmoc.Nuc-P26-L,6,7-pentamethyldihydrobenzofuran-5-sulfonyl)-L-arginine / NG-Fmoc.Nuc-P26-L,6,7-pentamethyldihydrobenzofuran-5-sulfonyl)-L-arginine / NG-Fmoc.Nuc-P26-L,6,7-pentamethyldihydrobenzofuran-5-sulfonyl)-L-arginine / NG-Fmoc.Nuc-P26-L,6,7-pentamethyldihydrobenzofuran-5-sulfonyl)-L-arginine / NG-Fmoc.Nuc-P26-L,6,7-pentamethyldihydrobenzofuran-5-sulfonyl)-L-arginine / NG-Fmoc.Nuc-P26-Larginine /         1.2.       Relevant identified uses       : Professional use only.         1.2.       Uses advised against       : Professional use only.         1.2.       Uses advised against       : Professional use only.         1.3.       Details of the supplier of the safety data sheet       : Cambridge lsopatories, Inc.         1.3.       Details of the supplier of the safety data sheet       : Cambridge lsopatories, Inc.         1.3.       Details of the supplier of the safety data sheet       : Cambridge lsopatories, Inc.         1.3.       Details of the supplier of the safety data sheet       : Cambridge lsopatories, Inc.         1.4.       1.90-322-1174       Int: 1-978-749-8000       : Cambridge lsopatories, Inc.         1.5.       Emergency turbehone number       : Cassification according to Regulation (EC) No. 1272/2008 [CLP]		
Synonyms : LArginine-N-FMOC,Pbf / Na-Fmoc-Nu-(2,24,6,7-pentamethyldihydrobenzofuran-5-suffonyl),L.arginine / Na-Fmoc-Nu-PbFL-arginine : 1.2. Relevant identified uses of the substance or mixture and uses advised against 1.2. Relevant identified uses : Professional use Industrial/Professional use gates : Professional use only. 1.2. Uses advised against No additional information available 1.3. Details of the supplier of the safety data sheet Cambridge Isotope Laboratories, Inc. 50 Frontage Road Andover, MA 01810 USA USA 1.800-322-1174 Int: 1-978-749-8000 cilsales@isotope.com : www.isotope.com Cambridge Isotope Laboratories, Inc. 50 Frontage Road Andover, IMA 01810 USA USA 1.800-322-1174 Int: 1-978-749-8000 cilsales@isotope.com : www.isotope.com Sectore : 1-800-424-9300 (24 hours) : SECTION 2: Hazards identification Classification according to Regulation (EC) No. 1272/2008 [CLP] Shin Int: 2. H315 Eye Int: 2. H315 Eye Int: 2. H315 Full text of H-phrases: see section 16 Classification according to Directive 67/548/EEC or 1999/45/EC X: R390/738 Full text of R-phrases: see section 16 Classification according to Directive 67/548/EEC or 1999/45/EC X: R390/738 Full text of R-phrases: see section 16 Classification (GHS-US) Shin Int: 2. H315 Eye Int: 2. A H315 Fye Int: 2. A H315		
Na-Fmoc-Nu-{2,2,4,6,7-pentamethyldihydrobenzofuran-5-sulfonyl)-L-arginine / Na-Fmoc-Nu-PbfL-arginine 1.2. Relevant identified uses of the substance or mixture and uses advised against 1.2.1. Relevant identified uses Main use category : Professional use Industrial/Professional use spec : For professional use only. 1.2.2. Uses advised against No additional information available 1.3. Details of the supplier of the safety data sheet Cambridge Isotope Laboratories, Inc. 50 Frontage Road Andver, MA 01810 USA USA: 1-800-322-1174 Int: 1-978-749-8000 citaales@lostope.com www.isotope.com Emergency number: Emergency number: Cherriter: 1-800-424-9300 (24 hours) International: 1-703-741-5970 (24 hours) SECTION 2: Hazard's Identification 2.1. Classification of the substance or mixture Classification according to Regulation (EC) No. 1272/2008 [CLP] Skin Irit. 2 H315 Eye Irit. 2 H315 Eye Irit. 2 H315 Full text of H-phrases: see section 16 Classification according to Directive 67/548/EEC or 1999/45/EC Xix R30/37/38 Full text of R-phrases: see section 16 Classification (GHS-US) Skin Irit. 2 H315 Eye Irit. 2 H319 Skin Irit. 2 H315 Eye Irit. 2 H315 Ey		
Na-Fmoc-Nua-Pbf-L-arginine  1.2. Relevant identified uses of the substance or mixture and uses advised against 1.2.1. Relevant identified uses Main use category : Professional use Main use category : Professional use only. 1.2.2. Uses advised against No additional information available 1.3. Details of the supplier of the safety data sheet Carabridge Isotope Laboratories, Inc. So Frontage Road Andover, MA 01810 USA USA: 1.800-322-1174 Int: 1-978-749-8000 calcales/Usatope.com Emergency telephone number Exercise State Stat	Synonyms	-
1.2.       Relevant identified uses of the substance or mixture and uses advised against         1.2.1.       Relevant identified uses         Main use category       ::         Professional use only.       :         1.2.1.       Uses advised against         No additional information available       :         1.3.       Details of the supplier of the safety data sheet         Cambridge Isotope Laboratories, Inc.       :         So Frontage Road       :         Andover, MA 01810       :         USA       :         USA       :         USA 1: 400:322:1174       Int: 1:978-749-8000         citasites@isotope.com       :         Emergency telephone number       :         Emergency numbers:       :         Cherritre: 1:400-424-9300 (24 hours)       :         International: 1:703-741-5970 (24 hours)       :         International: 1:703-741-5970 (24 hours)       :         SECTION 2: Hazards identification       :         2.1.       Classification of the substance or mixture         Classification according to Regulation (EC) No. 1272/2008 [CLP]       :         Skin Irrit: 2       H313         Full text of H-phrases: see section 16       :         Classification acco		
1.1.       Relevant identified uses         Main use category       : Professional use only.         1.2.       Uses advised against         No additional information available       Information available         1.3.       Details of the supplier of the safety data sheet         Cambridge isotope Laboratories, Inc.       Softrage Road         Andover, MA 01810       USA         USA       USA         USA       1.1.         Emergency telephone number         Emergency numbers:         Chemistre:       1-900-424-9300 (24 hours)         International:       1.705-741-5970 (24 hours)         SECTION 2: Hazards identification         2.1.       Classification of the substance or mixture         Classification according to Regulation (EC) No. 1272/2008 [CLP]         Skin Irit: 2       14315         Eye Irit: 2       14315         Eye Irit: 2       14315         Full text of H-phrases: see section 16         Classification according to Directive 67/548/EEC or 1999/45/EC         Xi; R38/37/38         Full text of R-phrases: see section 16         Classification (GHS-US)         Shin Irit: 2       14315         Eye Irit: 2A       14316         Eye Irit: 2A       14316		, and the second s
Main use category : Professional use Industrial/Professional use spec : For professional use only. <b>1.2.1. Uses advised against</b> No additional information available <b>1.3. Details of the supplier of the safety data sheet</b> Cambridge lostope Laboratories, Inc. So Frontage Road Andover, MA 01810 USA USA: 1-800-322-1174 Int: 1-978-749-8000 citasiegiisotope.com www.isotope.com Emergency telephone number Emergency telephone number Emergency numbers: Chemtres: 1-800-424-9300 (24 hours) International: 1-703-741-5970 (24 hours) International: 1-703-741-5970 (24 hours) SECTION 2: Hazards Identification <b>21. Classification of the substance or mixture</b> <b>Classification according to Regulation (EC) No. 1272/2008 [CLP]</b> Skin Irti: 2 H315 Eye Irti: 2 H319 STOT SE 3 H335 Full text of H-phrases: see section 16 <b>Classification according to Directive 67/548/EEC or 1999/45/EC</b> X; R36/37/38 Full text of R-phrases: see section 16 <b>Classification (CHS-US)</b> Skin Irti: 2 H315 Eye Irti: 2 H315 Eye Irti: 2 H316 Eye Irti: 2		substance or mixture and uses advised against
Industrial/Professional use spec : For professional use only.  1.2.1. Uses advised against No additional information available  1.3. Details of the supplier of the safety data sheet Cambridge Isotope Laboratories, Inc. So Frontage Road Andover, MA 01810 USA USA: 1-800-322-1174 Int: 1-978-749-8000 Cilsales@ijsotope.com Emergency telephone number Emergency telephone number Emergency telephone number Cassification according to the substance or mixture Classification according to Regulation (EC) No. 1272/2008 [CLP] Skin Irt: 2 H315 Eye Irt: 2.4 H315 Full text of H-phrases: see section 16 Classification according to Directive 67/548/EEC or 1999/45/EC Xi; R36/37/38 Full text of R-phrases: see section 16 Classification (GHS-US) Skin Irt: 2 H315 Eye Irt: 2.4 H315 Ey	1.2.1. Relevant identified uses	
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No additional information available  1.3. Details of the supplier of the safety data sheet Cambridge Isotope Laboratories, Inc. 50 Frontage Road Andover, MA 01810 USA USA: 1-800-322-1174 Int: 1-978-749-8000 Cissles@Biologe.com Emergency telephone number Emergency numbers: Chemtre:: 1-800-4224-9300 (24 hours) International: 1-703-741-5970 (24 hours) SECTION 2: Hazards identification 2.1. Classification of the substance or mixture Classification according to Regulation (EC) No. 1272/2008 [CLP] Skin Irrit. 2 H315 Eye Irrit. 2 H315 Full text of H-phrases: see section 16 Classification according to Directive 67/548/EEC or 1999/45/EC Xi; Ra%03/738 Full text of R-phrases: see section 16 Classification (Phrases: Phrases: See	Industrial/Professional use spec	: For professional use only.
No additional information available  1.3. Details of the supplier of the safety data sheet Cambridge Isotope Laboratories, Inc. 50 Frontage Road Andover, MA 01810 USA USA: 1-800-322-1174 Int: 1-978-749-8000 cisales@lootpe.com Emergency telephone number Emergency numbers: Chemtre: 1-800-4224-9300 (24 hours) International: 1-703-741-5970 (24 hours) SECTION 2: Hazards identification 2.1. Classification of the substance or mixture Classification according to Regulation (EC) No. 1272/2008 [CLP] Skin Irrit. 2 H315 Eye Irrit. 2 H315 Full text of H-phrases: see section 16 Classification according to Directive 67/548/EEC or 1999/45/EC Xi; R36/37/38 Full text of R-phrases: see section 16 Classification (HSUS) Skin Irrit. 2 H315 Full text of R-phrases: see section 16 Classification (HSUS) Skin Irrit. 2 H315 Full text of R-phrases: see section 16 Classification according to Directive 67/548/EEC or 1999/45/EC Xi; R36/37/38 Full text of R-phrases: see section 16 Classification (HSUS) Skin Irrit. 2 H315 Full text of R-phrases: see section 16 Classification (HSUS) Skin Irrit. 2 H315 Full text of R-phrases: see section 16 Classification (HSUS) Skin Irrit. 2 H315 Full text of R-phrases: see section 16 Classification (HSUS) Skin Irrit. 2 H315 Full text of R-phrases: see section 16 Classification (HSUS) Skin Irrit. 2 H315 Full text of R-phrases: see section 16 Classification (HSUS) Skin Irrit. 2 H315 Full text of R-phrases: see section 16 Classification (HSUS) Skin Irrit. 2 H315 Full text of R-phrases: see section 16 Classification (HSUS) Skin Irrit. 2 H315 Full text of R-phrases: see section 16 Classification (HSUS) Skin Irrit. 2 H315 Full text of R-phrases: see section 16 Classification (HSUS) Skin Irrit. 2 H315 Full text of R-phrases: See section 16 Classification (HSUS) Skin Irrit. 2 H315 Full text of R-phrases: See section 16 Classification (HSUS) Skin Irrit. 2 H315 Full text of R-phrases: See section 16 Classification (HSUS) Skin Irrit. 2 H315 Full text of R-phrases: See section 16 Classification (HSUS) Skin Irrit. 2 H315 Fu	1.2.2. Uses advised against	
Cambridge Isotope Laboratories, Inc. 50 Frontage Road Andover, MA 01810 USA USA: 1-800-322-1174 Int: 1-978-749-8000 cilaales@isotope.com www.isotope.com Emergency telephone number Emergency numbers: Chemtres: 1-800-424-9300 (24 hours) International: 1-703-741-5970 (24 hours) SECTION 2: Hazards identification 2.1. Classification of the substance or mixture Classification according to Regulation (EC) No. 1272/2008 [CLP] Skin Irrit. 2 H315 Eye Irrit. 2 H319 STOT SE 3 H335 Full text of H-phrases: see section 16 Classification according to Directive 67/548/EEC or 1999/45/EC Xi; R36/37/38 Full text of R-phrases: see section 16 Classification (GHS-US) Skin Irrit. 2 H315 Full text of R-phrases: see section 16		
Cambridge Isotope Laboratories, Inc. 50 Frontage Road Andover, MA 01810 USA USA: 1-800-322-1174 Int: 1-978-749-8000 cilsales@isotope.com www.isotope.com Emergency telephone number Emergency numbers: Chemtres: 1-800-424-9300 (24 hours) International: 1-703-741-5970 (24 hours) SECTION 2: Hazards identification 2.1. Classification of the substance or mixture Classification according to Regulation (EC) No. 1272/2008 [CLP] Skin Irit. 2 H315 Eye Irit. 2 H319 STOT SE 3 H335 Full text of H-phrases: see section 16 Classification according to Directive 67/548/EEC or 1999/45/EC Xi; R36/37/38 Full text of R-phrases: see section 16 Classification (GHS-US) Skin Irit. 2 H315 Eye Irit. 2 H315 Skin Irit. 2 H315 Skin Irit. 2 H315 Skin Irit. 2 H315	1.3. Details of the supplier of the sa	afety data sheet
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STOT SE 3 H335 Full text of H-phrases: see section 16 Classification according to Directive 67/548/EEC or 1999/45/EC Xi; R36/37/38 Full text of R-phrases: see section 16 Classification (GHS-US) Skin Irrit. 2 H315 Eye Irrit. 2A H319		
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Full text of R-phrases: see section 16 Classification (GHS-US) Skin Irrit. 2 H315 Eye Irrit. 2A H319	•	548/EEC or 1999/45/EC
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Skin Irrit. 2 H315 Eye Irrit. 2A H319	Hull text of R-phrases: see section 16	
Skin Irrit. 2 H315 Eye Irrit. 2A H319	Classification (GHS-US)	
Eye Irrit. 2A H319 STOT SE 3 H335		
SIUI SE 3 T330	Eye Irrit. 2A H319	
	5101 5E 3 H335	
Adverse physicochemical, human health and environmental effects		

No additional information available

Safety Data Sheet according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

for breathing	2.2. Label elements	
Signal word (CLP)       : Warning         Hazard statements (CLP)       : H315 - Causes serious eye iritation         H315 - Causes serious eye iritation       H315 - Causes serious eye iritation         H315 - Causes serious eye iritation       H316 - Causes serious eye iritation         H315 - Causes serious eye iritation       H316 - Causes serious eye iritation         H315 - Causes serious eye iritation       H316 - Causes serious eye iritation         H315 - Causes serious eye iritation       H316 - Causes serious eye iritation         H315 - Causes serious eye iritation       H316 - Causes serious eye iritation         H315 - Causes serious eye iritation       H316 - Causes serious eye iritation         H316 - Causes serious eye iritation       H317 - Causes serious eye iritation         H316 - Causes serious eye iritation       H317 - Causes serious eye iritation         H317 - Cause serious eye iritation       H316 - Causes serious eye iritation         H318 - Causes serious eye iritation       H315 - Causes serious eye iritation         H315 - Causes serious eye iritation       H315 - Causes serious eye iritation         H317 - Causes serious eye iritation       H316 - Causes serious eye iritation         H317 - Causes serious eye iritation       H316 - Causes serious eye iritation         H318 - Causes serious eye iritation       H317 - Use only outdors or in a well-wentilded area         <		5. 1272/2008 [CLP]
H319 - Causes serious eve irritation         H335 - May cause respiratory irritation         Precautionary statements (CLP)       P 261 - Avoid breathing dust, fume, gas, mist, spray, vapors         P244 - Wash Both hands thoroughly after handling         P271 - Use only outdoors or in a well-wentilated area         P280 - Wear protective clothing, protective gloves         P304+P340 - IF INHALED: Remove person to thersh air and keep comfortable for breathing         P304+P340 - IF INHALED: Remove person to thersh air and keep comfortable for breathing         P304+P340 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing         P312 - Call a POISON CENTER/doctor//if you feel unwell         GHS-US labeling         Hazard pictograms (GHS-US)       :         Warning         Hazard statements (GHS-US)       :         Warning         Hazard statements (GHS-US)       :         Precautionary statements (GHS-US)       :         P264 - Wash Both hands thoroughly after handling         P275 - Low objective clothing, protective gloves         P304 - P340 - IF interves       :         P420 - Vear protective clothing, protective gloves         P304 - P340 - IF interves       :         Signal word (GHS-US)       :         H319 - Causes serious eye irritatio	Signal word (CLP)	
P264 - Wash Both hands thoroughly after naming         P271 - Use only outdoors or in a well-ventilated area         P280 - Wear protective clothing, protective gloves         P302 + P352 - IF ON SKIN: Wash with plenty of water/         P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing         P305 + P351 + P338 - IF IN EVES: Rinse cautiously with water for several minutes. Remove contact lenese, if present and easy to do. Continue rinsing         P312 - Call a POISON CENTER/doctor//if you feel unwell         GHS-US labeling         Hazard pictograms (GHS-US)       :         Guisor         GHS-US labeling         Hazard statements (GHS-US)       :         Warning         Hazard statements (GHS-US)       :         Hazard statements (GHS-US)       :         P261 - Avoid breathing dust, gas, fume, mist, spray, vapors         P264 - Wash Both hands thoroughly after handling         P275 - Use only outdoors or in a well-ventilated area         P280 - Wear protective clothing, protective gloves         P302 + P35 - IF IN SKIN: Wash with plenty of soap and water         P303 - IF IN EVES.         P304 - P335 - IF IN SKIN: Wash with plenty of soap and water         P304 - P335 - IF IN SKIN: Wash with plenty of soap and water         P304 - P335 - IF IN SKIN: Wash with plenty of soap and water         <	Hazard statements (CLP)	H319 - Causes serious eye irritation
Hazard pictograms (GHS-US)       :         GHsor         Signal word (GHS-US)       :         Hazard statements (GHS-US)       :         Hazard statements (GHS-US)       :         Hazard statements (GHS-US)       :         Precautionary statements (GHS-US)       :         Precautionary statements (GHS-US)       :         Precautionary statements (GHS-US)       :         P261 - Avoid breathing dust, gas, fume, mist, spray, vapors         P271 - Use only outdoors or in a well-ventilated area         P280 - Wear protective clothing, protective gloves         P302+P352 - IF ON SKIN: Wash with plenty of soap and water         P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable         for breathing         P312 - Call a POISON CENTER/doctor/physician if you feel unwell         P321 - Specific treatment (see Hazard pictograms (CLP) on this label)         P332+P313 - If skin irritation oecurs: Get medical advice/attention         P332+P313 - If skin irritation persists: Get medical advice/attention         P332+P313 - If skin irritation persists: Get medical advice/attention         P332+P313 - If skin irritation persists: Get medical advice/attention         P332+P313 - If skin irritation persists: Get medical advice/attention         P332+P313 - If skin irritation persists: Get medical advice/attention     <	Precautionary statements (CLP)	<ul> <li>P264 - Wash Both hands thoroughly after handling</li> <li>P271 - Use only outdoors or in a well-ventilated area</li> <li>P280 - Wear protective clothing, protective gloves</li> <li>P302+P352 - IF ON SKIN: Wash with plenty of water/</li> <li>P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing</li> <li>P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing</li> </ul>
Signal word (GHS-US)       : Warning         Hazard statements (GHS-US)       : H315 - Causes skin irritation H319 - Causes serious eye irritation H335 - May cause respiratory irritation         Precautionary statements (GHS-US)       : P261 - Avoid breathing dust, gas, fume, mist, spray, vapors P264 - Wash Both hands thoroughly after handling P271 - Use only outdoors or in a well-ventilated area P280 - Wear protective clothing, protective gloves P302+P352 - IF ON SKIN: Wash with plenty of soap and water P304+P3240 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortabl for breathing P312 - Call a POISON CENTER/doctor/physician if you feel unwell P321 - Specific treatment (see Hazard pictograms (CLP) on this label) P332+P313 - If eye irritation persists. Get medical advice/attention P362 - Take off contaminated clothing and wash before reuse P403+P233 - Store in a well-ventilated place. Keep container tightly closed P403+P235 - Store locked up	GHS-US labeling	
Signal word (GHS-US)       : Warning         Hazard statements (GHS-US)       : H315 - Causes skin irritation H319 - Causes serious eye irritation H335 - May cause respiratory irritation         Precautionary statements (GHS-US)       : P261 - Avoid breathing dust, gas, fume, mist, spray, vapors P264 - Wash Both hands thoroughly after handling P271 - Use only outdoors or in a well-ventilated area P280 - Wear protective clothing, protective gloves P302+P352 - IF ON SKIN: Wash with plenty of soap and water P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortabl for breathing P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P312 - Call a POISON CENTER/doctor/physician if you feel unwell P332+P313 - If skin irritation occurs: Get medical advice/attention P337+P313 - If eye irritation persists: Get medical advice/attention P337+P313 - If eye irritation persists: Get medical advice/attention P337+P313 - Store in a well-ventilated place. Keep container tightly closed P405 - Store locked up	Hazard pictograms (GHS-US)	: GHS07
<ul> <li>H319 - Causes serious eye irritation H335 - May cause respiratory irritation</li> <li>Precautionary statements (GHS-US)</li> <li>P261 - Avoid breathing dust, gas, fume, mist, spray, vapors P264 - Wash Both hands thoroughly after handling P271 - Use only outdoors or in a well-ventilated area P280 - Wear protective clothing, protective gloves P302+P352 - IF ON SKIN: Wash with plenty of soap and water P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortabl for breathing P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P312 - Call a POISON CENTER/doctor/physician if you feel unwell P321 - Specific treatment (see Hazard pictograms (CLP) on this label) P332+P313 - If skin irritation occurs: Get medical advice/attention P337+P313 - If eye irritation persists: Get medical advice/attention P362 - Take off contaminated clothing and wash before reuse P403+P233 - Store in a well-ventilated place. Keep container tightly closed P405 - Store locked up</li> </ul>	Signal word (GHS-US)	: Warning
P264 - Wash Both hands thoroughly after handling P271 - Use only outdoors or in a well-ventilated area P280 - Wear protective clothing, protective gloves P302+P352 - IF ON SKIN: Wash with plenty of soap and water P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortabl for breathing P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P312 - Call a POISON CENTER/doctor/physician if you feel unwell P321 - Specific treatment (see Hazard pictograms (CLP) on this label) P332+P313 - If skin irritation occurs: Get medical advice/attention P362 - Take off contaminated clothing and wash before reuse P403+P233 - Store in a well-ventilated place. Keep container tightly closed P405 - Store locked up	Hazard statements (GHS-US)	H319 - Causes serious eye irritation
	Precautionary statements (GHS-US)	<ul> <li>P261 - Avoid breathing dust, gas, fume, mist, spray, vapors</li> <li>P264 - Wash Both hands thoroughly after handling</li> <li>P271 - Use only outdoors or in a well-ventilated area</li> <li>P280 - Wear protective clothing, protective gloves</li> <li>P302+P352 - IF ON SKIN: Wash with plenty of soap and water</li> <li>P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing</li> <li>P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing</li> <li>P312 - Call a POISON CENTER/doctor/physician if you feel unwell</li> <li>P321 - Specific treatment (see Hazard pictograms (CLP) on this label)</li> <li>P332+P313 - If skin irritation occurs: Get medical advice/attention</li> <li>P337+P313 - If eye irritation persists: Get medical advice/attention</li> <li>P362 - Take off contaminated clothing and wash before reuse</li> <li>P403+P233 - Store in a well-ventilated place. Keep container tightly closed</li> <li>P405 - Store locked up</li> </ul>

#### No additional information available

SECTION 3: Composition/information on ingredients			
3.1. Substances	3.1. Substances		
Name	Product identifier	%	Classification according to Directive 67/548/EEC
L-ARGININE-N-FMOC, PBF-OH (U-13C6, 99%) (CONTAINS SOLVENT) (Main constituent)	(CAS No) 154445-77-9 (Unlabeled)	100	Xi; R36/37/38

Safety Data Sheet according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
L-ARGININE-N-FMOC, PBF-OH (U-13C6, 99%) (CONTAINS SOLVENT) (Main constituent)	(CAS No) 154445-77-9 (Unlabeled)	100	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335

Full text of R-, H- and EUH-phrases: see section 16

Name	Product identifier	%	Classification (GHS-US)
L-ARGININE-N-FMOC, PBF-OH (U-13C6, 99%) (CONTAINS SOLVENT) (Main constituent)	(CAS No) 154445-77-9 (Unlabeled)	100	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335

Full text of H-phrases: see section 16

3.2. Mixtures	
Not applicable	
SECTION 4: First aid measures	
4.1. Description of first aid measures	
First-aid measures general	: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
First-aid measures after inhalation	: If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.
First-aid measures after skin contact	: Wash with soap and plenty of water. Consult a physician.
First-aid measures after eye contact	: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
First-aid measures after ingestion	: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
4.2. Most important symptoms and ef	fects, both acute and delayed
Symptoms/injuries after inhalation	: May be harmful if inhaled. Causes respiratory tract irritation.
Symptoms/injuries after skin contact	: May be harmful if absorbed through skin. Causes skin irritation.
Symptoms/injuries after eye contact	: Causes eye irritation.
Symptoms/injuries after ingestion	: May be harmful if swallowed.
4.3. Indication of any immediate medi	ical attention and special treatment needed
No additional information available	
<b>SECTION 5: Firefighting measures</b>	
5.1. Extinguishing media	
suitable extinguishing media	: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.
5.2. Special hazards arising from the	substance or mixture
No additional information available	
5.3. Advice for firefighters	
Firefighting instructions	: Wear self contained breathing apparatus for fire fighting if necessary.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
SECTION 6: Accidental release me	asures
	equipment and emergency procedures
6.1.1. For non-emergency personnel Emergency procedures	: Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust.
6.1.2. For emergency responders	
No additional information available	
6.2. Environmental precautions	
Do not let product enter drains.	
6.3. Methods and material for contain	ment and cleaning up
For containment	: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.
6.4. Reference to other sections	
No additional information available	

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Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<b>SECTION 7: Handling and storage</b>	ge
7.1. Precautions for safe handling	
Additional hazards when processed	<ul> <li>Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.</li> </ul>
Hygiene measures	: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
7.2. Conditions for safe storage, inc	cluding any incompatibilities
Technical measures	: Keep container tightly closed in a cool, dry and well-ventilated place.
Storage conditions	: Store refrigerated (-5 C to 5 C). Protect from light.
7.3. Specific end use(s)	
No additional information available	
SECTION 8: Exposure controls/p	personal protection
8.1. Control parameters	
No additional information available	

#### 8.2. **Exposure controls**

Appropriate engineering controls

Personal protective equipment

- : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. : Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.

Hand protection	: Wear suitable protective clothing and gloves.
Eye protection	: Wear safety glasses with side shields (or goggles) and a face shield.
Skin and body protection	<ul> <li>Choose body protection according to the amount and concentration of the dangerous substance at the work place.</li> </ul>
Respiratory protection	: When appropriate, use NIOSH/CEN approved respirator.

## **SECTION 9: Physical and chemical properties**

9.1. Information on basic physical an	d chemical properties
Physical state	: Solid
Appearance	: Powder, Crystalline.
Molecular mass	: 654.73 g/mol (Labeled)
Color	: White, Colourless.
Odor	: No data available
Odor threshold	: No data available
рН	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available

Viscosity, dynamic

Explosive properties

: No data available

: No data available

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according to Regulation (EC) No. 453/2010 and according	g to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Oxidizing properties	: No data available
Explosive limits	: No data available
9.2. Other information	
No additional information available	
<b>SECTION 10: Stability and reactivity</b>	
10.1. Reactivity	
No additional information available	
10.2. Chemical stability	
Two years after receipt of order if stored as above	ve. Re-QC after two years.
10.3. Possibility of hazardous reactions	
No additional information available	
10.4. Conditions to avoid	
No additional information available	
10.5. Incompatible materials	
Strong oxidizing agents.	
10.6. Hazardous decomposition products	
carbon oxides. Nitrogen oxides. Sulphur oxides.	
<b>SECTION 11: Toxicological informat</b>	ion
11.1. Information on toxicological effects	
Acute toxicity	: Not classified
Skin corrosion/irritation	: Causes skin irritation.
	No data available
Serious eye damage/irritation	: Causes serious eye irritation.
	No data available
Respiratory or skin sensitization	: Not available
Germ cell mutagenicity	No data available : Not available
Carcinogenicity	: Not classified
Reproductive toxicity	: Not available
Specific target organ toxicity (single exposure)	: May cause respiratory irritation.
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	<ul> <li>To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.</li> </ul>
Symptoms/injuries after inhalation	: May be harmful if inhaled. Causes respiratory tract irritation.
Symptoms/injuries after skin contact	: May be harmful if absorbed through skin. Causes skin irritation.
Symptoms/injuries after eye contact	: Causes eye irritation.
Symptoms/injuries after ingestion	: May be harmful if swallowed.

SECTI	ON 12: Ecological information	
12.1.	Toxicity	
No additi	ional information available	
12.2.	Persistence and degradability	
L-ARG	ININE-N-FMOC, PBF-OH (U-13C6, 99%)	(CONTAINS SOLVENT) (154445-77-9 (Unlabeled))
Persiste	ence and degradability	Not available.
12.3.	Bioaccumulative potential	
L-ARG	ININE-N-FMOC, PBF-OH (U-13C6, 99%)	(CONTAINS SOLVENT) (154445-77-9 (Unlabeled))

Bioaccumulative potential Not available.

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12.4. Mobility in soil	
L-ARGININE-N-FMOC, PBF-OH (U-13C6, 99%)	(CONTAINS SOLVENT) (154445-77-9 (Unlabeled))
Ecology - soil	Not available.
12.5. Results of PBT and vPvB assessment	
No additional information available	
12.6. Other adverse effects	
	Not available.
SECTION 13: Disposal considerations	
13.1. Waste treatment methods	
Regional legislation (waste)	Waste materials should be disposed of under conditions which meet Federal, State, and Local environmental control regulations.
Waste disposal recommendations	Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
Ecology - waste materials	Dispose of as unused product.
SECTION 14: Transport information	
In accordance with ADR / RID / ADNR / IMDG / IC	AO / IATA
14.1. UN number	
Not applicable	
14.2. UN proper shipping name	
Not applicable	
14.3. Additional information	
Other information	No supplementary information available.
Special transport precautions	Not dangerous goods.
Overland transport	
No additional information available	
Transport by sea	
No additional information available	
Air transport	
No additional information available	
14.4. Environmental hazards	
Other information	No supplementary information available.
14.5. Special precautions for user	
	Not dangerous goods.
14.6. Transport in bulk according to Annex	II of MARPOL 73/78 and the IBC Code
Not applicable	
SECTION 15: Regulatory information	
15.1. US Federal regulations	
L-ARGININE-N-FMOC, PBF-OH (U-13C6, 99%)	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

## 15.2. International regulations

CANADA

L-ARGININE-N-FMOC, PBF-OH (U-13C6, 99%) (CONTAINS SOLVENT) (154445-77-9 (Unlabeled)) Listed on the Canadian DSL (Domestic Substances List) inventory.

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### 15.2.1. National regulations

No additional information available

15.3. US State regulations		
L-ARGININE-N-FMOC, PBF-OH (U-13C6, 99%) (CONTAINS SOLVENT)(154445-77-9 (Unlabeled))		
State or local regulations	U.S Pennsylvania - RTK (Right to Know) List U.S New Jersey - Right to Know Hazardous Substance List This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.	

## **SECTION 16: Other information**

#### Other information

: This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

#### Full text of R-, H- and EUH-phrases::

Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Skin Irrit. 2	skin corrosion/irritation Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
R36/37/38	Irritating to eyes, respiratory system and skin
Xi	Irritant

NFPA health hazard	<ul> <li>2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.</li> </ul>
NFPA fire hazard	: 0 - Materials that will not burn.
NFPA reactivity	: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.

### **HMIS III Rating**

Health	: 2 Moderate Hazard - Temporary or minor injury may occur
Flammability	: 0 Minimal Hazard
Physical	: 0 Minimal Hazard

#### CIL Multi-Solvent Mixture SDS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product